UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/876,445	06/07/2001	Aries Lee	67,200-418	9171

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EXAMINER
NAHAR, QAMRUN

ART UNIT	PAPER NUMBER
2124	

DATE MAILED: 11/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

		Application No.	Applicant(s)
Office Action Summary		09/876,445	LEE ET AL.
		Examiner	Art Unit
		Qamrun Nahar	2124

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *24 August 2004*.

2a) ☒ This action is **FINAL.** 2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-5 and 7-11* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-5 and 7-11* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1.   This action is in response to the amendment filed on 8/24/04.

2.   The rejection under 35 U.S.C. 102(e) as being anticipated by Kravitz (U.S.

6,397,385) to claims 1-11 is moot in view of the new ground(s) of rejection.

3.   Claim 6 has been cancelled.

4.   Claims 1-3 and 7-9 have been amended.

5.   Claims 1-5 and 7-11 are pending.

6.   Claims 1, 4-5, 7 and 10-11 stand finally rejected under 35 U.S.C. 103(a) as being

unpatentable over Kravitz (U.S. 6,397,385) in view of Sten (U.S. 6,668,374).

7.   Claims 2 and 8 stand finally rejected under 35 U.S.C. 103(a) as being

unpatentable over Kravitz (U.S. 6,397,385) in view of Gross (U.S. 5,964,874).

8.   Claims 3 and 9 stand finally rejected under 35 U.S.C. 103(a) as being

unpatentable over Kravitz (U.S. 6,397,385) in view of Rohrer (U.S. 5,313,398).

Response to Amendment

Claim Rejections - 35 USC § 103

9.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

10.   Claims 1, 4-5, 7 and 10-11 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Kravitz (U.S. 6,397,385) in view of Sten (U.S. 6,668,374).

Per Claim 1 (Amended):

Kravitz teaches a method for upgrading a computer system ("The present invention is a method and apparatus for performing a live upgrade of the software running on a continuously operating system, such as for example, a telecommunications system, without interrupting the operation of the system." in column 2, lines 32-36) comprising: providing a computer system having associated therewith an upgrade management utility, the upgrade management utility providing for a buffering of a series of incoming requests to the computer system when upgrading the computer system while operating the computer system, to thus provide an uninterrupted idle state when upgrading the computer system when operating the computer system; executing the upgrade management utility when operating the computer system to effect uninterrupted idle state; upgrading the computer system within the uninterrupted idle state to provide an upgraded computer system while accumulating a series of buffered incoming requests ("In order to maintain the integrity of the activation operation, it is desirable that the code fragment which is being overlaid with the load-address-and jump instruction is not actually executing at the moment the activation occurs. There are several ways in which to accomplish this. One embodiment of the invention includes building the activation routine as the lowest priority software task in the computer. This means that no other task is then executing, so that code, which is then executing, will not be inadvertently over-written. Specifically, in the illustrative embodiment, the upgrade start task 448 is identified as the lowest priority task on the board. The upgrade start task 448 runs when the other tasks have already run. Then, the upgrade start task 448 is given control of the processor; it locks out the other software for the short interval it takes to do the

instruction overlay. Thus, the operation of overlaying an activation instruction sequence

does not interfere with, or cannot be interfered with by, other software running on the

computer." in column 10, lines 53-67 to column 11, lines 1-3); and terminating the

upgrade management utility after upgrading the computer system within the

uninterrupted idle state and releasing the series of buffered incoming requests for

operation within the upgraded computer system ("When the upgrade start task 448 has

control of the processor, the CPU saves away the old address, overlays the new address

and jump instruction so that the upgrade can be accessed. Then, interrupts are re-enabled

and control of the CPU is given up. At this point, the upgrade has been validated,

downloaded and activated while the overall system continuous operation without

interruption. ... A query command can be generated by the host in which the host 4

queries the matrix card 400 for a list of upgrades that have been downloaded and whether

those upgrades have been activated for each card in the node. The system monitor 450

can access the per card base load status 452 and the card upgrade status 454 and report a

list of upgrades and base loads running on each card to the host 4." in column 11, lines 8-

21).

     Kravitz does not explicitly teach a firmware upgrade or a hardware upgrade. Sten

teaches a firmware upgrade (column 2, lines 22-25).

     It would have been obvious to one having ordinary skill in the computer art at the

time of the invention was made to modify the method disclosed by Kravitz to include a

firmware upgrade using the teaching of Sten. The modification would be obvious

because one of ordinary skill in the art would be motivated to minimize the amount of

time required for a firmware upgrade.

Per Claim 4:

The rejection of claim 1 is incorporated, and Kravitz further teaches wherein the upgrade management utility is resident within the computer system (column 10, lines 53-67 to column 11, lines 1-3).

Per Claim 5:

The rejection of claim 1 is incorporated, and Sten further teaches wherein the upgrade management utility is not resident within the computer system (column 3, lines 39-50).

Per Claims 7 (Amended) & 10-11:

These are system versions of the claimed method discussed above (claims 1 and 4-5, respectively), wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, these claims are also obvious.

11.   Claims 2 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kravitz (U.S. 6,397,385) in view of Gross (U.S. 5,964,874).

Per Claim 2 (Amended):

Kravitz teaches a method for upgrading a computer system ("The present invention is a method and apparatus for performing a live upgrade of the software running on a continuously operating system, such as for example, a telecommunications

system, without interrupting the operation of the system." in column 2, lines 32-36)

comprising: providing a computer system having associated therewith an upgrade

management utility, the upgrade management utility providing for a buffering of a series

of incoming requests to the computer system when upgrading the computer system while

operating the computer system, to thus provide an uninterrupted idle state when

upgrading the computer system when operating the computer system; executing the

upgrade management utility when operating the computer system to effect uninterrupted

idle state; upgrading the computer system within the uninterrupted idle state to provide an

upgraded computer system while accumulating a series of buffered incoming requests

("In order to maintain the integrity of the activation operation, it is desirable that the code

fragment which is being overlaid with the load-address-and jump instruction is not

actually executing at the moment the activation occurs. There are several ways in which

to accomplish this. One embodiment of the invention includes building the activation

routine as the lowest priority software task in the computer. This means that no other

task is then executing, so that code, which is then executing, will not be inadvertently

over-written. Specifically, in the illustrative embodiment, the upgrade start task 448 is

identified as the lowest priority task on the board. The upgrade start task 448 runs when

the other tasks have already run. Then, the upgrade start task 448 is given control of the

processor; it locks out the other software for the short interval it takes to do the

instruction overlay. Thus, the operation of overlaying an activation instruction sequence

does not interfere with, or cannot be interfered with by, other software running on the

computer." in column 10, lines 53-67 to column 11, lines 1-3); and terminating the

upgrade management utility after upgrading the computer system within the

uninterrupted idle state and releasing the series of buffered incoming requests for

operation within the upgraded computer system ("When the upgrade start task 448 has

control of the processor, the CPU saves away the old address, overlays the new address

and jump instruction so that the upgrade can be accessed. Then, interrupts are re-enabled

and control of the CPU is given up. At this point, the upgrade has been validated,

downloaded and activated while the overall system continuous operation without

interruption. ... A query command can be generated by the host in which the host 4

queries the matrix card 400 for a list of upgrades that have been downloaded and whether

those upgrades have been activated for each card in the node. The system monitor 450

can access the per card base load status 452 and the card upgrade status 454 and report a

list of upgrades and base loads running on each card to the host 4." in column 11, lines 8-

21).

It would have been obvious to one having ordinary skill in the computer art at the

Kravitz does not explicitly teach that the computer system is operated within a

facility selected from the group consisting of chemical fabrication facilities, mechanical

fabrication facilities and electrical fabrication facilities. Gross teaches that the computer

system is operated within a facility selected from the group consisting of chemical

fabrication facilities, mechanical fabrication facilities and electrical fabrication facilities

(column 1, lines 39-46).

It would have been obvious to one having ordinary skill in the computer art at the

time of the invention was made to modify the method disclosed by Kravitz to include that

the computer system is operated within a facility selected from the group consisting of

chemical fabrication facilities, mechanical fabrication facilities and electrical fabrication

facilities using the teaching of Gross. The modification would be obvious because one of

ordinary skill in the art would be motivated to reduce system down time.

Per Claim 8 (Amended):

This is a system version of the claimed method discussed above, claim 2, wherein

all claim limitations also have been addressed and/or covered in cited areas as set forth

above. Thus, accordingly, this claim is also obvious.

12.   Claims 3 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Kravitz (U.S. 6,397,385) in view of Rohrer (U.S. 5,313,398).

Per Claim 3 (Amended):

Kravitz teaches a method for upgrading a computer system ("The present

invention is a method and apparatus for performing a live upgrade of the software

running on a continuously operating system, such as for example, a telecommunications

system, without interrupting the operation of the system." in column 2, lines 32-36)

comprising: providing a computer system having associated therewith an upgrade

management utility, the upgrade management utility providing for a buffering of a series

of incoming requests to the computer system when upgrading the computer system while

operating the computer system, to thus provide an uninterrupted idle state when

upgrading the computer system when operating the computer system; executing the

upgrade management utility when operating the computer system to effect uninterrupted

idle state; upgrading the computer system within the uninterrupted idle state to provide an

upgraded computer system while accumulating a series of buffered incoming requests

("In order to maintain the integrity of the activation operation, it is desirable that the code

fragment which is being overlaid with the load-address-and jump instruction is not

actually executing at the moment the activation occurs. There are several ways in which

to accomplish this. One embodiment of the invention includes building the activation

routine as the lowest priority software task in the computer. This means that no other

task is then executing, so that code, which is then executing, will not be inadvertently

over-written. Specifically, in the illustrative embodiment, the upgrade start task 448 is

identified as the lowest priority task on the board. The upgrade start task 448 runs when

the other tasks have already run. Then, the upgrade start task 448 is given control of the

processor; it locks out the other software for the short interval it takes to do the

instruction overlay. Thus, the operation of overlaying an activation instruction sequence

does not interfere with, or cannot be interfered with by, other software running on the

computer." in column 10, lines 53-67 to column 11, lines 1-3); and terminating the

upgrade management utility after upgrading the computer system within the

uninterrupted idle state and releasing the series of buffered incoming requests for

operation within the upgraded computer system ("When the upgrade start task 448 has

control of the processor, the CPU saves away the old address, overlays the new address

and jump instruction so that the upgrade can be accessed. Then, interrupts are re-enabled

and control of the CPU is given up. At this point, the upgrade has been validated,

downloaded and activated while the overall system continuous operation without

interruption. ... A query command can be generated by the host in which the host 4

queries the matrix card 400 for a list of upgrades that have been downloaded and whether

those upgrades have been activated for each card in the node. The system monitor 450

can access the per card base load status 452 and the card upgrade status 454 and report a

list of upgrades and base loads running on each card to the host 4." in column 11, lines 8-

21).

Kravitz does not explicitly teach that the computer system is operated within a

microelectronic fabrication facility. Rohrer teaches that the computer system is operated

within a microelectronic fabrication facility (column 5, lines 39-47 and column 6, lines

21-34).

It would have been obvious to one having ordinary skill in the computer art at the

time of the invention was made to modify the method disclosed by Kravitz to include that

the computer system is operated within a microelectronic fabrication facility using the

teaching of Rohrer. The modification would be obvious because one of ordinary skill in

the art would be motivated to simulate the design and manufacture of a microelectronic

circuit in a computer system.

Per Claim 9 (Amended):

This is a system version of the claimed method discussed above, claim 3, wherein

all claim limitations also have been addressed and/or covered in cited areas as set forth

above. Thus, accordingly, this claim is also obvious.

Response to Arguments

13.   Applicant's arguments with respect to claims 1-5 and 7-11 have been considered

but are moot in view of the new ground(s) of rejection.

Conclusion

14.   Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the

advisory action. In no event, however, will the statutory period for reply expire later than

SIX MONTHS from the date of this final action.

15.   Any inquiry concerning this communication from the examiner should be directed

to Qamrun Nahar whose telephone number is (571) 272-3730. The examiner can

normally be reached on Mondays through Thursdays from 8:30 AM to 6:00 PM. The

examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Kakali Chaki, can be reached on (571) 272-3719. The fax phone number for

the organization where this application or processing is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the receptionist whose telephone number is (703) 305-

3900.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR. Status

information for unpublished applications is available through Private PAIR only. For

more information about the PAIR system, see http://pair-direct.uspto.gov. Should you

have questions on access to the Private PAIR system, contact the Electronic Business

Center (EBC) at 866-217-9197 (toll-free).

QN
November 18, 2004

ANIL KHATRI
PRIMARY EXAMINER